AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A process for evaluating donor bone suitable for implant preparation comprising:

 a. imaging a <u>donor</u> bone using a three-dimensional imaging scan at one or more sites of the bone;

 b. measuring the <u>donor</u> bone parameters from the scan image; and

 c. assessing the <u>donor</u> bone<u>'s</u> suitability for fabrication into a given implant configuration based on the measured parameters.

2. (Currently Amended). The process of Claim 1 wherein the <u>donor</u> bone is registered or oriented in space before cutting.

3. (Currently Amended) The process of Claim 1 wherein the implant configuration is marked on the <u>donor</u> bone.

4. (Currently Amended) The process of Claim 1, and further comprising: formulating an implant cutting plan after assessing the <u>donor</u> bone's suitability for fabrication into a given implant configuration based on the measured parameters.

5. (Currently Amended) The process of Claim 4 wherein the <u>donor</u> bone is cut into implants based on the implant cutting plan.

6. (Original) The process of Claim 4 where the cutting plan is formulated from a computer based model

7. (Original) The process of Claim 6 where the model is scalable.

8. (Currently Amended) The process of Claim 5 wherein the <u>donor</u> bone is cut manually.

9. (Currently Amended) The process of Claim 5 wherein the <u>donor</u> bone is cut by an automated device.

10. (Original) The process of Claim 1 wherein the imaging step comprises scanning by computed tomography.

11. (Original) The process of Claim 1 wherein the imaging step comprises scanning by peripheral computed tomography.

12. (Original) The process of Claim 1 wherein the imaging step comprises scanning by magnetic resonance imaging.

13. (Original) The process of Claim 1 wherein the imaging step comprises scanning by gamma-ray computed tomography.

14. (Currently Amended) A process for evaluating donor bone suitability for implant preparation, comprising:

     a. imaging the <u>donor</u> bone using three-dimensional image scanning at one or more sites on the <u>donor</u> bone;

     b. extrapolating from morphometric measurements to dimensions at another skeletal site on the same or another bone:

     c. determining the <u>donor</u> bone's suitability for implant geometries.

15. (Currently Amended) The process of Claim 14, and further comprising: marking an implant configuration on the <u>donor</u> bone.

16. (Currently Amended) The process of Claim 14, and further comprising: formulating an implant cutting plan after assessing the donor bone's suitability for implant geometrics.

17. (Currently Amended) The process of Claim 15 wherein the donor bone is cut into implants based on the implant configuration.

18. (Currently Amended) The process of Claim 17 wherein the donor bone is cut manually.

19. (Currently Amended) The process of Claim 17 wherein the donor bone is cut by a computer assisted device.

20. (Original) The process of Claim 14 wherein the imaging step comprises producing the image by computed tomography.

21. (Original) The process of Claim 14 wherein the imaging step comprises producing the image by peripheral computed tomography.

22. (Original) The process of Claim 14 wherein the imaging step comprises producing the image by magnetic resonance imaging.

23. (Original) The process of Claim 14 wherein the imaging step comprises producing the image by gamma-ray computed tomography.

24. (Original) A process for evaluating donor bone suitability for implant preparation comprising non-destructively assessing cortical thickness at one or more pre-selected sites of the donor bone.

25. (Currently Amended) The process of Claim 24 including measuring the donor bone to within +/- 0.005mm accuracy.

26. (Currently Amended) The process of Claim 24 including measuring the <u>donor</u> bone to within +/- 0.01mm accuracy.

27. (Currently Amended) The process of Claim 24 including measuring the <u>donor</u> bone to within +/- 0.1mm accuracy.

28. (Currently Amended) The process of Claim 24 including measuring the <u>donor</u> bone to within +/- 0.5mm accuracy.

29. (Currently Amended) The Process of Claim 24 including measuring the <u>donor</u> bone to within +/- 1.0mm accuracy.

30. (Original) The process of Claim 1 wherein said process is employed as a method for determining critical attributes of bone related to predetermined release specifications for the bone for either processing or final product specifications.

31. (Original) The process of Claim 14 wherein said process is employed as a method for determining critical attributes of bone related to predetermined release specifications for the bone for either processing or final product specifications.

32. (Currently Amended) A method of formulating a bone implant cutting plan, comprising:

assessing the three-dimensional morphometric measurements of ~~said~~ a donor bone, whereby said measurements specify data regarding the fabrication of a given implant configuration based on said measurements.

33. (Original) The method of Claim 32 wherein said measurements are derived from a model selected from the group consisting of a mathematical model, a statistical model, a neural network model, and a computer model.

34. (Currently Amended) The method of Claim 32 wherein said cutting plan identifies cutting locations on said <u>donor</u> bone.

35. (Original) The method of Claim 32 wherein said cutting plan identifies bone which may be processed to provide a subset of bone implants having one or more specified dimensional, strength, or physical characteristics.

36. (Currently Amended) The method of Claim 32 wherein said cutting plan identifies dimensions and shapes which may be obtained from the <u>donor</u> bone having specified morphmometric measurements.